

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): An optical power control system configured for use with a wavelength division demultiplexer, said optical power control system comprising:

a plurality of photodetectors connected so as to monitor output power on a plurality of outputs of said demultiplexer, each of said outputs carrying a different WDM channel; and

a **[[gain]]** control system that receives power level indications from said plurality of photodetectors, **[[and]]** controls a gain of an optical amplification system providing input to **[[said demultiplexer]]** an optical filter, and controls a tilt of said optical filter providing input to said demultiplexer; and

wherein said **[[gain]]** control system sets a gain of said optical amplification system such that a power level indication based on said output powers monitored by said plurality of photodetectors is set within a desired range and sets a tilt of said optical filter such that a difference in said monitored output powers is reduced.

Claim 2 (original): The system of claim 1 wherein said power level indication comprises an average of said output powers monitored by said plurality of photodetectors.

Claim 3 (original): The system of claim 2 wherein said desired range corresponds to an optical receiver dynamic range.

Cancel Claim 4 (original): The system of claim 1 further comprising:
an optical filter having dynamically controllable response characteristics, said optical filter receiving input from said optical amplification system and outputting a filtered optical signal to said demultiplexing system.

Cancel Claim 5 (original): The system of claim 4 wherein said optical filter comprises a tilt control filter.

Claim 6 (currently amended): The system of claim **[[4]] 1** wherein said **[[gain]]** control system sets a tilt of said **[[tilt control]]** optical filter to reduce a difference in monitored output powers for a highest WDM channel and a lowest WDM channel.

Claim 7 (currently amended): A WDM receiver system comprising:
an optical amplifier system having variable gain and receiving a WDM signal comprising multiple wavelengths;

an optical filter having dynamically controllable tilt, said optical filter receiving an amplified WDM signal input from said optical amplifier system and outputting a filtered WDM signal;

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a demultiplexer receiving **[[an amplified WDM signal from said optical amplifier system]]** said filtered WDM signal from said optical filter and separating said **[[amplified]]** filtered WDM signal into a plurality of single wavelength signals each corresponding to a different WDM channel;

a plurality of photodetectors monitoring power levels of said plurality of single wavelength signals; and

a **[[gain]]** control system that receives power level indications from said plurality of photodetectors, **[[and]]** controls a gain of said optical amplifier system such that a power level indication based on said output powers monitored by said plurality of photodetectors is set within a desired range, and controls a tilt of said optical filter such that a difference in said output powers monitored by said plurality of photodetectors between selected WDM channels is reduced.

Claim 8 (original): The system of claim 7 wherein said power level indication comprises an average of said output powers monitored by said plurality of photodetectors.

Claim 9 (original): The system of claim 8 wherein said desired range corresponds to an optical receiver dynamic range.

Cancel Claim 10 (original): The system of claim 7 further comprising:
an optical filter having dynamically controllable response characteristics, said optical filter receiving input from said optical amplifier system and outputting a filtered optical signal to said demultiplexer.

Claim 11 (cancelled)

Claim 12 (currently amended): The system of claim ~~[[10]]~~ 7 wherein said gain control system sets a tilt of said ~~[[tilt control]]~~ optical filter to reduce a difference in monitored output powers for a highest WDM channel and a lowest WDM channel.

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Claim 13 (currently amended): In a WDM receiver system, a method for controlling power on multiple WDM channels, said method comprising:
monitoring output powers on individual ones of said multiple WDM channels;
determining a power level indication based on said monitored output powers; and
setting amplification on a signal including said multiple WDM channels so that said power level indication falls within a desired range; and
filtering said signal including said multiple WDM signals to adjust gain tilt among said multiple WDM channels so that a difference in said monitored output powers between selected WDM channels is reduced.

Claim 14 (original): The method of claim 13 wherein said power level indication comprises an average of said monitored output powers.

Claim 15 (original): The method of claim 13 further comprising:
using a demultiplexer to separate said multiple WDM channels into individual wavelength signals.

Claim 16 (cancelled)

Claim 17 (currently amended): The method of claim ~~[[16]]~~ 13 wherein filtering comprises:

filtering said signal using filter response characteristics that reduce a difference in monitored output powers for a highest WDM channel and a lowest WDM channel.

Claim 18 (currently amended): In a WDM receiver system, apparatus for controlling power on multiple WDM channels, said apparatus comprising:

means for monitoring output powers on individual ones of said multiple WDM channels;
means for determining a power level indication based on said monitored output powers;
means for setting amplification on a signal including said multiple WDM signals so that said power level indication falls within a desired range; and

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means for filtering said signal including said multiple WDM signals to adjust gain tilt among said multiple WDM channels so that a difference in said monitored output powers between selected WDM channels is reduced.

Claim 19 (original): The apparatus of claim 18 wherein said power level indication comprises an average of said monitored output powers.

Claim 20 (original): The apparatus of claim 18 further comprising:
means for separating said multiple WDM channels into individual wavelength signals.

Cancel Claim 21 (original): The apparatus of claim 18 further comprising:
means for filtering said signal including said multiple WDM signals to adjust gain tilt among said multiple WDM channels.

Claim 22 (currently amended): The apparatus of claim ~~[[21]]~~ 18 wherein said filtering means comprises:

means for filtering said signal using filter response characteristics that reduce a difference in monitored output powers for a highest WDM channel and a lowest WDM channel.
